

THE CLAIMS

1. (Currently amended; once amended) A preparation of a naturally occurring mammalian islet neogenesis associated protein (INGAP protein) substantially free of other mammalian proteins, wherein the INGAP protein has the amino acid sequence shown in SEQ ID NO: 2.
2. (Cancelled)
3. (Currently amended; twice amended) A preparation of a polypeptide which comprises a sequence of at least 15 consecutive amino acids of a naturally occurring mammalian islet neogenesis associated protein (INGAP protein), wherein said polypeptide has immunogenic activity and wherein said polypeptide is a portion of INGAP protein, wherein the INGAP protein has the amino acid sequence shown in SEQ ID NO: 2.
4. (Currently amended; twice amended) [The preparation of claim 3 wherein said] A polypeptide which is a fusion of [said] (1) a sequence of at least 15 consecutive amino acids of a naturally occurring mammalian islet neogenesis associated protein (INGAP protein), wherein the INGAP protein has the amino acid sequence shown in SEQ ID NO: 2, wherein said polypeptide has immunogenic activity to (2) a second polypeptide derived from a second protein.
5. (Original) The preparation of claim 3 wherein said polypeptide is conjugated to a second polypeptide.
6. (Original) The preparation of claim 3 wherein said polypeptide is conjugated to a solid support.
7. (Currently amended; once amended) The preparation of claim 3 wherein said polypeptide [has a biological activity of said mammalian INGAP protein] is capable of stimulating beta cell regeneration in pancreatic ductal cells.

8. (Currently amended; once amended) The preparation of claim [7] 3 wherein [said biological activity is] the polypeptide has the ability to stimulate pancreatic duct cells to grow and proliferate.

9. (Original) The preparation of claim 3 wherein said polypeptide comprises amino acids #103 to #122 of the mammalian INGAP protein as shown in SEQ ID NO:2.

10. (Original) The preparation of claim 3 wherein said polypeptide comprises at least 130 consecutive amino acids of said mammalian INGAP protein as defined by SEQ ID NO:2.

11. (Currently amended; once amended) A preparation of an islet [eogenesis] neogenesis associated protein (INGAP protein) of a mammal according to claim 1, [substantially purified from other proteins of the mammal] wherein said INGAP protein is made by the process of inducing production of said protein by [inducible upon] cellophane-wrapping of pancreas of the mammal.

12. (Currently amended; once amended) A pharmaceutical composition for treatment of pancreatic insufficiency, comprising:

a naturally occurring mammalian islet neogenesis associated protein (INGAP protein) in a pharmaceutically acceptable diluent or carrier, wherein the INGAP protein has the amino acid sequence shown in SEQ ID NO: 2.

13. (Cancelled)

14. (Currently Amended; twice amended) A pharmaceutical composition comprising:

a preparation of a polypeptide which comprises a sequence of at least 15 consecutive amino acids of a naturally occurring mammalian islet neogenesis associated protein (INGAP protein) and a pharmaceutically acceptable diluent or carrier, wherein said polypeptide is capable

of stimulating β cell regeneration of pancreatic ductal cells, wherein the INGAP protein has the amino acid sequence shown in SEQ ID NO: 2, and wherein said polypeptide is a portion of said INGAP protein.

15. (Currently Amended; twice amended) [The] A pharmaceutical composition [of claim 14] comprising:

a preparation of a fusion polypeptide which is a fusion of (1) a [said] sequence of at least 15 consecutive amino acids of a naturally occurring mammalian islet neogenesis associated protein (INGAP protein) to (2) a second polypeptide derived from a second protein; and a pharmaceutically acceptable diluent or carrier, wherein said fusion polypeptide is capable of stimulating β cell regeneration of pancreatic ductal cells, wherein the INGAP protein has the amino acid sequence shown in SEQ ID NO: 2.

16. (Original) The pharmaceutical composition of claim 14 wherein said polypeptide is conjugated to a second polypeptide.

17. (Cancelled)

18. (Cancelled)

19. (Original) The pharmaceutical composition of claim 14 wherein said polypeptide comprises amino acids #103 to #122 of the mammalian INGAP protein as shown in SEQ ID NO:2.

20. (Original) The pharmaceutical composition of claim 14 wherein said polypeptide comprises at least 130 consecutive amino acids of said mammalian INGAP protein as defined by SEQ ID NO:2.

21. (Original) The preparation of claim 1 which is free of other mammalian proteins.

22. (Original) The preparation of claim 11 which is free from other proteins of the mammal.

23. (Original) The preparation of claim 11 wherein the INGAP protein has 174 amino acids.
24. (Original) The preparation of claim 11 wherein the INGAP protein is purified utilizing antibodies which immunoreact with INGAP.
25. (Currently amended; once amended) The preparation of claim 1 wherein the INGAP protein is made by a process of expression in a host cell which comprises a vector which comprises a nucleotide sequence which encodes the INGAP protein.
26. (Currently amended; once amended) The preparation of claim 3 wherein said polypeptide is made by a process of expression in a host cell which comprises a vector which comprises a nucleotide sequence which encodes the polypeptide.
27. (Previously presented) The pharmaceutical composition of claim 12 wherein said INGAP protein is substantially free of other mammalian proteins.
28. (Previously presented) The pharmaceutical composition of claim 14 wherein said polypeptide is substantially free of other mammalian protein.
29. (Newly presented) A preparation of a polypeptide which comprises a sequence of at least 15 consecutive amino acids shown in SEQ ID NO: 2, wherein said polypeptide is a portion of islet neogenesis associated protein (INGAP protein).
30. (Newly presented) The preparation of claim 29 wherein the polypeptide comprises a sequence of at least 15 consecutive amino acids selected from amino acids #103 to #122 as shown in SEQ ID NO: 2.
31. (Newly presented) A pharmaceutical composition comprising a preparation of a polypeptide which comprises a sequence of at least 15 consecutive amino acids shown in SEQ ID NO: 2, wherein said polypeptide is capable of stimulating β cell regeneration in pancreatic ductal cells,

wherein said polypeptide is a portion of islet neogenesis associated protein (INGAP protein).

32. (Newly presented) The pharmaceutical composition of claim 31 wherein the polypeptide comprises a sequence of at least 15 consecutive amino acids selected from amino acids #103 to #122 as shown in SEQ ID NO: 2.

33. (Newly presented) A preparation of a polypeptide which consists of a portion of islet neogenesis associated protein (INGAP protein) of at least 15 consecutive amino acids shown in SEQ ID NO: 2.

34. (Newly presented) The preparation of claim 33 wherein the polypeptide consists of a portion of islet neogenesis associated protein (INGAP protein) of at least 15 consecutive amino acids selected from amino acids #103 to #122 as shown in SEQ ID NO: 2.

35. (Newly presented) A pharmaceutical composition comprising a polypeptide which consists of a portion of islet neogenesis associated protein (INGAP protein) of at least 15 consecutive amino acids shown in SEQ ID NO: 2, wherein said polypeptide is capable of stimulating β cell regeneration in pancreatic ductal cells.

36. (Newly presented) The pharmaceutical composition of claim 35 wherein the polypeptide consists of a portion of islet neogenesis associated protein (INGAP protein) of at least 15 consecutive amino acids selected from amino acids #103 to #122 as shown in SEQ ID NO: 2.